



Europäisches Patentamt  
European Patent Office  
Office européen des brevets



(11) EP 0 742 287 A2

(12) EUROPEAN PATENT APPLICATION

(43) Date of publication:  
13.11.1996 Bulletin 1996/46

(51) Int. Cl.<sup>6</sup>: C12Q 1/68, C07H 21/00,  
B01J 19/00

(21) Application number: 96303245.3

(22) Date of filing: 09.05.1996

(84) Designated Contracting States:  
DE FR GB IT NL

(30) Priority: 10.05.1995 US 440742  
03.04.1996 US 630427

(71) Applicants:  
• McGall, Glenn H.  
Mountain View, CA 94043 (US)  
• Miyada, Charles G.  
Mountain View, CA 94041 (US)  
• Cronin, Maureen T.  
Los Altos, CA 94024 (US)  
• Tan, Jennifer D.  
Newark, CA 94560 (US)  
• Chee, Mark S.  
Palo Alto, CA 94306 (US)

(72) Inventors:  
• McGall, Glenn H.  
Mountain View, CA 94043 (US)  
• Miyada, Charles G.  
Mountain View, CA 94041 (US)  
• Cronin, Maureen T.  
Los Altos, CA 94024 (US)  
• Tan, Jennifer D.  
Newark, CA 94560 (US)  
• Chee, Mark S.  
Palo Alto, CA 94306 (US)

(74) Representative: Bizley, Richard Edward et al  
Hepworth, Lawrence, Bryer & Bizley  
Merlin House  
Falconry Court  
Bakers Lane  
Epping Essex CM16 5DQ (GB)

(54) Modified nucleic acid probes

(57) Oligonucleotide analogue arrays attached to solid substrates and methods related to the use thereof are provided. The oligonucleotide analogues hybridize to nucleic acids with either higher or lower specificity than corresponding unmodified oligonucleotides. Target

nucleic acids which comprise nucleotide analogues are bound to oligonucleotide and oligonucleotide analogue arrays.

5' T3 DNA target on 300nm/200nm 4-mer perfect/mismatch probes  
(10 nM, 5x SSPE, 20°C-50°C, 90 min wait, bbl, 15µl)



5' T3 target oligonucleotide on 300nm/200nm 4-mer perfect/mismatch probes  
(10 nM, 5x SSPE, 20°C-50°C, 90 min wait, bbl, 15µl)



Figure 1a



Figure 1b

EP 0 742 287 A2